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REMARKS

Claims 1-34 are currently pending in the subject application and are presently under consideration. Claims 28 and 33 have been amended as shown at pages 6 and 7 of the Reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Objection to Title

The title is objected to as not being descriptive of the invention. The title was amended in the Reply filed on January 12, 2006 to more clearly indicate the multi-dimensional nature of the interrupt requests. Accordingly, withdrawal of this objection is respectfully requested.

II. Rejection of Claims 1-11, 17, 18, 21-23, 27 Under 35 U.S.C. §103(a)

Claims 1-11, 17, 18, 21-23, 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Laurenti (US 6,502,152) in view of Short *et al.* (US 5,708,814). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Laurenti in view of Short *et al.* does not teach each and every element of the subject invention as recited in the subject claims.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The subject invention relates to assignment of interrupt resources to requestors submitting multidimensional interrupt requests. Applicant's claimed invention can fulfill the

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requests satisfying substantially all dimensions concurrently and according to policies that fulfill the system performance requirements. In particular, independent claim 1 (and similarly independent claim 34) recites *at least one request associated with an interrupt resource, the request including at least two dimensions related to an interrupt and an interrupt service component, at least one dimension including a time component*. For example, the time component can be employed by the requestor to negotiate an allocation of a specific period of the resource's time. The requestor would have the resource for the specified period of time. The requestor would relinquish the resource at the end of that time period, allowing other requestors to negotiate an allocated period of the resource's time.

As conceded in the Office Action, Laurenti does not teach or suggest the aforementioned novel aspects of applicant's claimed invention. The cited art discloses a custom processor that provides for dual interrupt vector mapping. Short *et al.* is cited to make up for this deficiency of Laurenti. However, Short *et al.* also fails to teach a time component as one of the dimensions of the request. The cited reference discloses a system for batching requests from a requestor to reduce CPU time wasted on servicing interrupt requests that come in bursts from a requestor. Short *et al.* employs a counter and a timer to track the requests coming in from the requestor. When the request count exceeds a threshold or the time exceeds a threshold, whichever comes first, the queued requests are processed in a batch mode with a single interrupt request. The timer is not part of the request. Therefore, Laurenti and Short *et al.* fail to teach or suggest that the request includes at least two dimensions related to an interrupt and an interrupt service component, at least one dimension including a time component.

In view of at least the foregoing discussion, applicant's representative respectfully submits that Laurenti and Short *et al.*, alone or in combination, fail to teach or suggest all limitations of applicant's invention as recited in independent claims 1 (and claims 2-11, 17, 18, 21-23, 27 that depend therefrom), and thus fails to make obvious the claimed invention. Accordingly, this rejection should be withdrawn.

III. Rejection of Claims 28-30, 32-34 Under 35 U.S.C. §103(a)

Claims 28-30, 32-34 are rejected under 35 U.S.C. §103(a) as being unpatentable over Laurenti (US No. 6,502,152) in view of Karamatas *et al.* (US 2005/0060460). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Laurenti,

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Short *et al.* and Bonola, alone or in combination, do not teach each and every element of the subject invention as recited in the subject claims.

Independent claim 28 (and similarly independent claims 33 and 34) recites *concurrently assigning the interrupt range and the interrupt table in response to the interrupt request and in view of available system resources, the interrupt request including a requested period of a resource's time*. As noted *supra*, Laurenti fails to teach the similar limitation of independent claim 1, and Karamatas *et al.* fails to make up for the aforementioned deficiencies of Laurenti. Karamatas *et al.* teaches a system for managing assignments of interrupts based upon performance characteristics achieved by assignments. However, Karamatas *et al.* is silent regarding a time component as part of an interrupt request. Accordingly, applicant's representative respectfully submits that Laurenti, and Karamatas *et al.*, alone or in combination, fail to teach or suggest all limitations of applicant's invention as recited in independent claim 28, 33 and 34 (and claims 29, 30 and 23 that depend therefrom), and thus fails to make obvious the claimed invention. For this reason, withdrawal of this rejection is respectfully requested.

IV. Rejection of Claims 12-16, 19, 20, 24-26 Under 35 U.S.C. §103(a)

Claims 12-16, 19, 20, 24-26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Laurenti in view of Short *et al.* further in view of Bonola (US 6,370,606). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Laurenti, Short *et al.* and Bonola, alone or in combination, do not teach each and every element of the subject invention as recited in the subject claims.

Claims 12-16, 19, 20, 24-26 and 31 depend from independent claim 1. As noted *supra*, Laurenti and Short *et al.* fail to teach all of the limitations of independent claim 1, and Bonola fails to make up for the aforementioned deficiencies of Laurenti. Bonola teaches a system for simulating hardware interrupts in a multiprocessor system. However, Bonola is silent regarding a time component as part of an interrupt request. Accordingly, applicant's representative respectfully submits that Laurenti, Short *et al.* and Bonola, alone or in combination, fail to teach or suggest all limitations of applicant's invention as recited in independent claim 1 (and claims 12-16, 19, 20 and 24-26 that depend there from), and thus fails to make obvious the claimed invention. This rejection should be withdrawn.

10/673,805MS301930.01/MSFTP381US**V. Rejection of Claim 31 Under 35 U.S.C. §103(a)**

Claim 31 is rejected under 35 U.S.C. §103(a) as being unpatentable over Laurenti in view of Karamatas *et al.* further in view of Bonola (US 6,370,606). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Laurenti, Karamatas *et al.* and Bonola, alone or in combination, do not teach each and every element of the subject invention as recited in the subject claim. Claim 31 depends from Independent claim 28. As discussed above, Laurenti, Karamatas *et al.* and Bonola fail to teach a requested period of a resource's time as part of an interrupt request. Accordingly, applicant's representative respectfully submits that Laurenti, Karamatas *et al.* and Bonola, alone or in combination, fail to teach or suggest all limitations of applicant's invention as recited in independent claim 28 (and claim 31 that depends there from), and thus fails to make obvious the claimed invention. This rejection should be withdrawn.

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The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP381US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number below.

Respectfully submitted,

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